18FX6A

Pentagrid Converter

7-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC).	18	volts
Current	0.1 ± 6%	amp
Warm-up time (Average).	20	sec

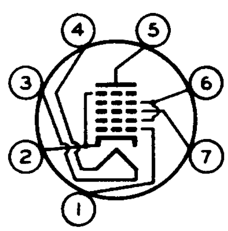
Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*[a]	
Grid No.3 to all other electrodes (RF input)	7	7	μμf
Plate to all other electrodes (Mixer input)	8	13	μμf
Grid No.1 to all other electrodes (Oscillator input) . . .	5.5	5.5	μμf
Grid No.3 to plate.	0.3 max.	0.25 max.	μμf
Grid No.3 to grid No.1.	0.15 max.	0.15 max.	μμf
Grid No.1 to plate.	0.1	0.05	μμf
Grid No.1 to cathode & grid No.5. .	3	3	μμf
Cathode & grid No.5 to all other electrodes except grid No.1 . .	15	20	μμf

Mechanical:

Operating Position. . . . . Any
Maximum Overall Length. . . . . 2-1/8"
Maximum Seated Length . . . . 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) . . 1-1/2" ± 3/32"
Diameter. . . . . 0.650" to 0.750"
Dimensional Outline . . . . See *General Section*
Bulb. T5-1/2
Base. . . . . . .Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW. 7CH

Pin 1 - Grid No.1
Pin 2 - Cathode, Grid No.5
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Plate
Pin 6 - Grid No.2, Grid No.4
Pin 7 - Grid No.3

CONVERTER

Maximum Ratings, *Design-Maximum Values:*

PLATE VOLTAGE	150 max.	volts
GRIDS-No.2 & No.4 (SCREEN-GRIDS) SUPPLY VOLTAGE.	150 max.	volts

GRIDS-No.2 & No.4 VOLTAGE	110 max.	volts
GRIDS-No.2 & No.4 INPUT	1.2 max.	watts
PLATE DISSIPATION	1 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

Characteristics:

With Separate Excitation[b]

Plate Voltage	100	volts
Grids-No.2 & No.4 Voltage	100	volts
Grid-No.3 Voltage	-1.5	volts
Grid-No.1 Resistor	20000	ohms
Plate Resistance (Approx.)	0.4	megohm
Conversion Transconductance	480	μmhos
Plate Current	2.3	ma
Grids-No.2 & No.4 Current	6.2	ma
Grid-No.1 Current	0.5	ma
Total Cathode Current	9	ma
Grid-No.3 Voltage (Approx.) for conversion transconductance (μmhos) = 10	-21	volts

Oscillator Characteristics (Not Oscillating):[c]

Plate & Grids-No.2 & No.4 Voltage	100	volts
Grid-No.3 Voltage	0	volts
Grid-No.1 Voltage	0	volts
Amplification Factor[d]	22	
Oscillator Transconductance[d]	7000	μmhos
Cathode Current	24	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20	-9.2	volts

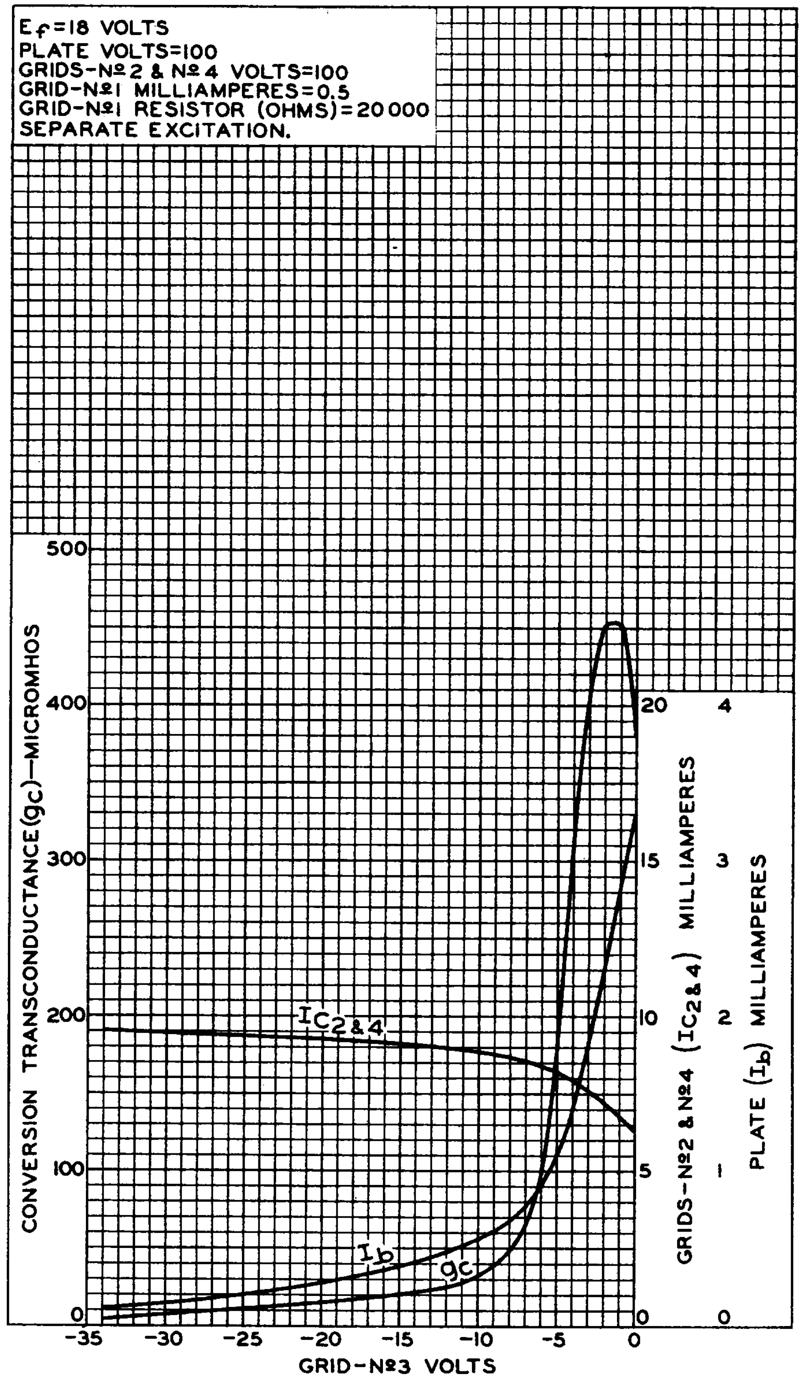
[a] With external shield JEDEC No.316 connected to cathode.

[b] The characteristics shown with separate excitation correspond very closely with those obtained in a self-excited-oscillator circuit operating with zero bias.

[c] With grids No.2 & No.4 connected to plate.

[d] Between grid No.1 and grids No.2 & No.4 connected to plate.

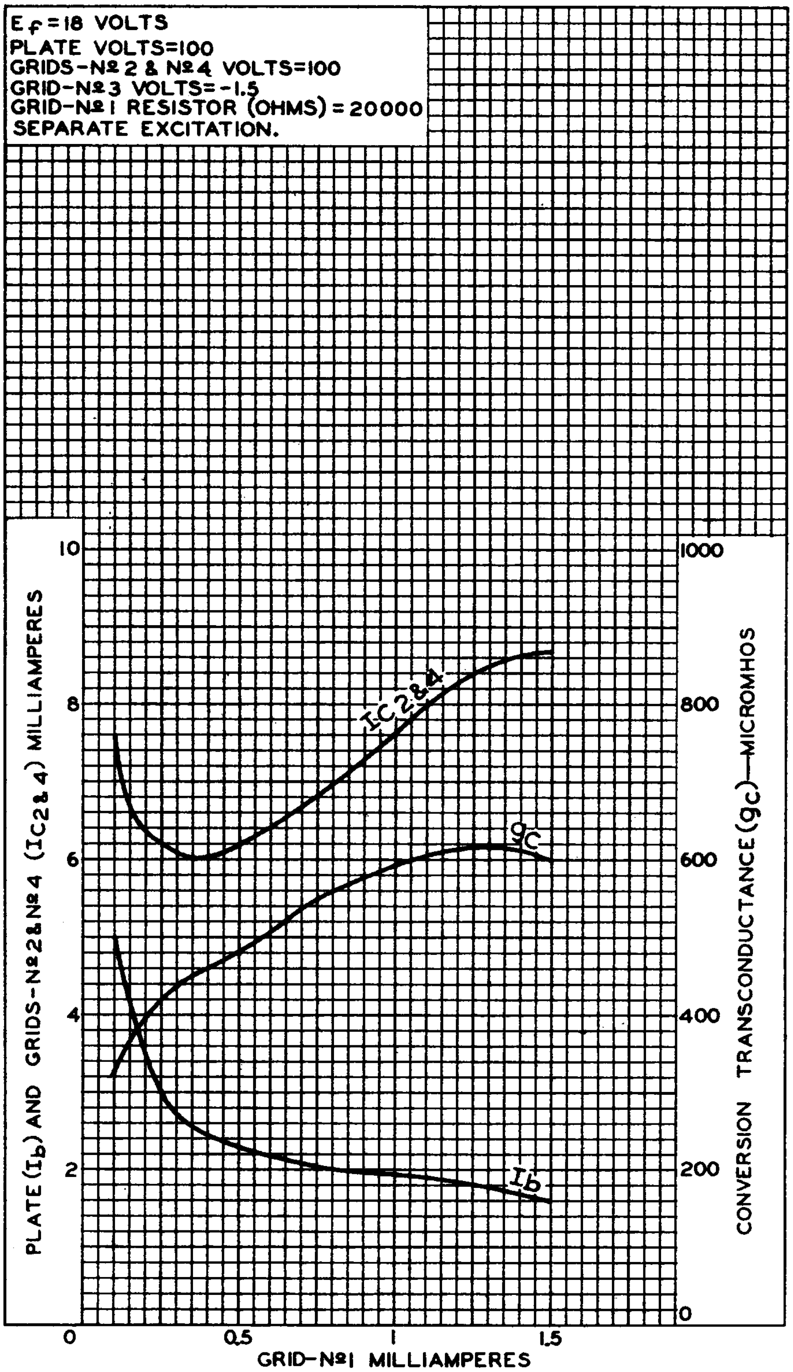
AVERAGE CHARACTERISTICS



92CM-10777

18FX6A

AVERAGE CHARACTERISTICS



92CM-10782